

Applicant: Kari Hasanen et al.
Application No.: 09/980,061
Art Unit: 1731

16. (previously presented) The method of claim 12 wherein the movement of the shoe is regulated based on the measurement results utilizing a computing algorithm, and hydraulic cylinders of the shoe of the shoe press/shoe calender are controlled to operate such that the shoe moves in a desired manner to a desired position.

17. (previously presented) The method of claim 12 wherein the step of closing the shoe against the backing roll includes quickly closing the nip when in the initial stages of closing, and slowing down the movement when the nip starts to be almost closed.

18. (currently amended) An arrangement for closing a shoe positioned within a belt, against a backing roll to form a nip between the backing roll and the shoe of a shoe press/shoe calender in a paper machine, the nip extending in a cross machine direction, the arrangement comprising:

- a shoe roll, having a shoe, a belt within which the shoe is positioned, and hydraulic cylinders connected ~~thereto~~ to the shoe for moving the shoe towards and away from the backing roll;
- at least two measuring devices for measuring the position of the shoe, the measuring devices being positioned to determine the position of the shoe with respect to a reference position at two positions on the shoe which are spaced in the cross machine direction; and
- means for controlling the position of the shoe during the closing of the shoe against the backing roll to form the nip based on the results obtained by the measuring devices so the nip is of a desired shape.

19. (previously presented) The arrangement of claim 18 wherein the at least two measuring devices comprise position measuring sensors placed close to a tending side edge of the paper machine and a driving side edge of the paper machine.

Applicant: Kari Hasanen et al.
PCT App. No.: PCT/IB00/00732

18. An arrangement for positioning a shoe of a shoe press/shoe calender in a paper machine comprising:

a shoe roll, having a shoe and hydraulic cylinders connected thereto for moving the shoe;

at least two measuring devices for measuring the position of the shoe; and

means for controlling the position of the shoe based on the results obtained by means of the measuring devices so as to be as desired in the direction of nip compression.

19. The arrangement of claim 18 wherein the at least two measuring devices comprise position measuring sensors placed close to a tending side edge of the paper machine and a driving side edge of the paper machine.

20. The arrangement of claim 19 further comprising a position measuring sensor placed in the middle of the paper machine between the tending side edge and the driving side edge.

21. The arrangement of claim 18 further comprising means for moving the hydraulic cylinders based on the results of the measurement in order to position the shoe in a desired position.

22. The arrangement of claim 18 further comprising a unit in which a computing algorithm is carried out based on the results of the measurement in order to give flow instructions to hydraulic valves which control the hydraulic cylinders such that the hydraulic cylinders move the shoe to a desired position.